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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/748,012 | 12/27/2000 | Hiroyuki Nakano | 001745 | 4666 |

7590

11/06/2002

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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/748,012

Applicant(s)

NAKANO, HIROYUKI

Examiner

Marc Jimenez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 12/27/1999. It is noted, however, that applicant has not filed a certified copy of the Japan 11-369952 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 3, 4, and 7** are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh et al. (5,547,742).

Satoh et al. teach a core (col. 9, lines 11 and 58), a primer layer (col. 9, line 14) applied on the periphery of the core (col. 9, lines 11 and 58), and a fluoro-resin top layer (col. 9, lines 16-17 and 61-62) applied on the periphery of the primer layer (col. 9, line 14), wherein glass particles (col. 10, line 49) are mixed into at least one of the primer layer (col. 9, line 14) and the top layer (col. 9, lines 16-17 and 61-62). The glass particles (col. 10, line 49) are mixed into only the top layer (col. 9, lines 16-17 and 61-62) in a weight ratio of 1% or more (col. 10, lines 50-53). The top layer (col. 9, lines 16-17 and 61-62) includes PFA (col. 4, line 5).

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4. **Claims 1, 3, 4, and 7** are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuyama (JP 57172374 A).

Matsuyama teaches a fixing roller (PURPOSE, line 2 and CONSTITUTION, lines 2-3) comprising a core (CONSTITUTION, lines 1-2, "metallic roller which becomes the base material of the fixing roller"), a primer layer applied on the periphery of the core (CONSTITUTION, lines, 4-5, "a primer is applied as required to increase the adhesive force"), and a fluororesin top layer applied on the periphery of the primer layer (CONSTITUTION, lines 7-15), wherein glass particles are mixed into at least one of the primer layer and the top layer (CONSTITUTION, lines 5-6, "glass fibers are mixed in a fluororesin disperse liquid"). Note that the mixing ratio of glass particles in the top layer is arranged in a weight ratio of 1% or more (PURPOSE, lines 3-5, "25wt% fluororesin glass fibers to a fluororesin" and the top layer includes PFA (CONSTITUTION, line 11).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al.

Satoh et al. teach the invention cited above with the exception of the glass particles being

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mixed into only the primer layer.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, that the glass particles being mixed only to the primer layer is clearly a matter of design choice because applicant has not disclosed that mixing glass particles only to the primer layer provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with glass particles in the top layer as taught by Satoh et al. or with the claimed glass particles being mixed only to the primer layer because glass particles placed in either the top layer only or the primer layer only perform the same function of reinforcing the layers. It is noted that in Table 3 of applicants specification at page 12, the use of a roll with glass particles mixed only into the primer layer ("2nd embodiment") does not provide an improvement over the embodiment of glass particles is mixed into only the top layer ("1st embodiment"). In fact, the embodiment with glass particles mixed only into the primer layer ("2nd embodiment") actually produces the worst result according to Table 3 of applicant's specification compared with glass particles mixed only into the top layer (1st embodiment) or glass particles mixed into both the top and primer layers (3rd embodiment).

7. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama.

Matsuyama teaches the invention cited above with the exception of the glass particles being mixed into only the primer layer.

It would have been obvious to one of ordinary skill in the art, at the time of the invention,

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that the glass particles being mixed only to the primer layer is clearly a matter of design choice because applicant has not disclosed that mixing glass particles only to the primer provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with glass particles in the top layer as taught by Matsuyama or with the claimed glass particles being mixed only to the primer layer because glass particles placed in either the top layer only or the primer layer only perform the same function of providing good releasability. It is noted that in Table 3 of applicants specification at page 12, the use of a roll with glass particles mixed only into the primer layer ("2nd embodiment") does not provide an improvement over the embodiment of glass particles is mixed into only the top layer ("1st embodiment"), Matsuyama also teach that the glass particles is mixed to the top layer. In fact, the embodiment with glass particles mixed only into the primer layer ("2nd embodiment") actually produces the worst result according to Table 3 of applicant's specification compared with glass particles mixed only into the top layer (1st embodiment) or glass particles mixed into both the top and primer layers (3rd embodiment).

8. **Claims 5, 6, and 9-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. in view of Yakushiji (JP 58017872).

Satoh et al. teach the invention cited above with the exception of having glass particles mixed into the primer layer.

Yakushiji teaches mixing glass particles (constitution, lines 5-12) into a primer layer 2.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Satoh et al. with glass particles mixed into the primer layer, in light of the teachings of Yakushiji, in order to reinforce the primer layer.

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With respect to Claims 9-15, Satoh et al./Yakushiji teach the invention cited above with the exception of having a fluororesin overtop layer applied on the peripheral surface of the top layer. It would have been obvious to one of ordinary skill in the art, at the time of the invention, that the use of an additional fluororesin overtop layer is clearly a matter of design choice because applicant has not disclosed that using a fluororesin overtop layer provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well without an overtop layer as taught by Satoh et al. or with the claimed fluororesin overtop layer because applicant states that the same results are achieved with or without the overtop layer (see applicant's specification page 17, lines 23-29 to page 18).

9. **Claims 5 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama in view of Yakushiji (JP 58017872 A).

Matsuyama teaches the invention cited above with the exception of the glass particles being mixed into the primer layer.

Yakushiji teaches glass particles (CONSTITUTION, lines 5-8) mixed into a primer layer

2.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have alternatively provided the invention of Matsuyama with glass particles mixed into the primer layer, in light of the teachings of Yakushiji, in order to reinforce the primer layer as suggested by Yakushiji at lines 7-8 of the CONSTITUTION.

The limitations of claim 6 have been addressed above as being taught by Matsuyama.

10. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama in view of Ream et al. (6,284,373).

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Matuyama teach the invention cited above with the exception of the total thickness of the primer layer and the top layer being arranged in up to 30micrometer.

Ream et al. teach a primer layer and top layer being arranged in up to 30micrometer (col. 4, lines 24-34).

It would have been obvious to one of ordinary skill to have made the thickness of the primer layer and the top layer being arranged in up to 30micrometer, in light of the teachings of Ream et al., in order to provide a layer having the desired thickness that is evenly applied to the roll surface and has good releasability.

11. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matuyama in view of Tsukida et al. (5,450,181) and Takahashi et al. (6,132,815).

Matuyama teach the invention cited above with the exception of the total thickness of the primer layer and the top layer being arranged in up to 30micrometer.

Tsukida et al. teach a fluoresin layer having a thickness of 20micrometer (col. 21, lines 26-27).

Takahashi et al. teach a primer layer having a thickness of 8micrometer (col. 8, lines 47-48).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Matuyama with the appropriate primer layer and top layer thicknesses, in light of the teachings of Tsukida et al. and Takahashi et al., in order to provide a layer having the desired thickness that is evenly applied to the roll surface and has good releasability.

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12. **Claims 9-11 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matuyama in view of Jinzai (5,572,275).

Matuyama teaches the invention cited above with the exception of having a fluororesin overtop layer applied to the peripheral surface of the top layer.

Jinzai teaches in fig. 2 a fixing roller 1 which has a fluororesin overtop layer 1a (see also col. 4, line 19) applied to the peripheral surface of a top layer 1a. Note that Jinzai also teaches a primer layer 1b and the top layer 1a is also a fluororesin layer (PFA).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Matuyama with a fluororesin overtop layer applied to the peripheral surface of the top layer, in light of the teachings of Jinzai, in order to provide an anti-offset layer (as suggested by Jinzai at col. 4, line 18). Note that Jinzai teaches that the overtop layer 1d is devoid of the glass particles and the overtop layer 1d includes PFA (col. 4, line 19).

13. **Claims 12, 13, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matuyama in view of Jinzai as applied to claims 9, 10, and 14 above, and further in view of Ream et al.

Matuyama/Jinzai teach the invention cited above with the exception of the total thickness of the primer layer, top layer, and the overtop layer being arranged in up to 30micrometer.

Ream et al. teach primer, top, and overtop layers being arranged in up to 30micrometer (col. 4, lines 24-34).

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It would have been obvious to one of ordinary skill in the art to have made the thickness of the primer top, and overtop layers being arranged in up to 30micrometer, in light of the teachings of Ream et al., in order to provide a layer having the desired thickness that is evenly applied to the roll surface and has good releasability.

14. **Claims 12, 13, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matuyama in view of Jinzai as applied to Claims 9, 10, and 14 respectively above, and further in view of Tsukida and Takahashi et al.

Matuyama/Jinzai teach the invention cited above with the exception of the total thickness of the primer, top, and overtop layers being arranged in up to 30micrometer.

Tsukida et al. teach a fluoro-resin layer having a thickness of 20 micrometer (col. 21, lines 26-27).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have made the thickness of the primer, top, and overtop layers being arranged in up to 30micrometer, in light of the teachings of Tsukida and Takahashi et al., in order to provide a layer having the desired thickness that is evenly applied to the roll surface and has good releasability.

Response to Arguments

15. Applicant's arguments with respect to Claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

16. Applicant's arguments filed 8/12/2002 have been fully considered but they are not persuasive.

17. In response to applicant's argument that Satoh et al. does not teach a fluoro-resin because the fluorosilicone rubber of Satoh et al. includes a fluoro-resin, but is not itself a fluoro-resin, it is noted that the claims do not preclude other elements from being included with the fluoro-resin. Furthermore, the claims are not only limited to a "fluoro-resin itself".

18. In response to applicant's argument with respect to claim 2 under 35 U.S.C. 103(a) over Satoh et al. that the examiner has failed to show references that teach all the limitations and a suggestion or motivation to combine or change the references, it is noted that claim 2 was rejected under design choice because in Table 3 of applicants specification at page 12, the use of a roll with glass particles mixed only into the primer layer ("2nd embodiment") does not provide an improvement over the embodiment of glass particles is mixed into only the top layer ("1st embodiment"). In fact, the embodiment with glass particles mixed only into the primer layer ("2nd embodiment") actually produces the worst result according to Table 3 of applicant's specification compared with glass particles mixed only into the top layer (1st embodiment) or glass particles mixed into both the top and primer layers (3rd embodiment).

19. Applicant argues that one skilled in the art would not have been motivated to use the fillers of Satoh et al. in an amount less than 10%, nor would one have been motivated to use the fillers for reasons other than reinforcement, however, the claims do not require any percentage of fillers to be provided less than 10% or preclude reinforcement be done.

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20. In response to applicant's argument that Satoh would lead one skilled in the art away from using the fillers for scratch resistance, however, the claims are not limited to any scratch resistance.

21. In response to applicant's argument that there is no motivation to use glass fibers in the primer layer, it is noted that Yakushiji clearly suggests using glass fibers to reinforce the primer layer (see rejections above).

Contact Information

22. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Thursday and the second Friday of the bi-week, between 9am-6pm**.

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• If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.


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MJ

November 1, 2002


GREGORY M. VIDOVICH
PRIMARY EXAMINER